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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,089	11/19/2001	Yuan Huan Lee	MR2349-721	8229
4586	7590	11/17/2004	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			CHORBAJI, MONZER R	
			ART UNIT	PAPER NUMBER
			1744	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,089

Applicant(s)

LEE ET AL.

Examiner

MONZER R CHORBAJI

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This final office action is in response to the amendment received on 09/08/2004

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 1, 3-4, 6-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Law (U.S.P.N. 2,354,817) in view of Robertson et al (U.S.P.N. 4,892,712) and further in view of Morgan, Jr. (U.S.P.N. 5,853,676) and Kratz (DE 19912517).

With respect to claim 1, the ('817) reference discloses an ultraviolet lamp device (10) including the following: a main body (18 and 16) having a receiving tank (the unlabeled motor container for motor 51), a motor (51) is within the tank and having a rotation shaft (54), a fan blade (55), a reticular lamp-fixing element (31 and its components 32, 34, 37, 56, and 57) joined on the main body (39), a UV lamp (49) such that the lamp is positioned by the reticular lamp-fixing element (49 and 31) inside the main body (18 and 16). Further, the ('818) reference device includes an electric connection seat (46) and a power source (a required feature for the device to operate). The system of the ('817) reference (31, 56, and 57) forms a network of structure for supporting the UV lamps, i.e., reticular. In the ('817) reference air is withdrawn by the fan through the reticular structure then passing through the fan and further through the UV lamps (49). The ('817) reference fails to teach the use of an annular photocatalytic lamp and also fails to explicitly disclose a stabilizer, and a starter being disposed in the main body. However, the ('712) reference teaches a photocatalytic lamp that includes a glass-fiber-cloth (col.3, lines 16-20 and lines 39-59) being sleeved outside the lamp (col.6, lines 3-5, 14-16, and lines 30-33) such that the glass-fiber-cloth having a photocatalytic coating formed of titanium dioxide (col.3, lines 39-59), but fails to teach the use of an annular photocatalytic lamp, a stabilizer, and a starter being disposed in

the main body. The ('676) reference, which is in the art of sanitizing fluids, teaches the use of an annular UV lamp (22 or 26). However, the ('676) reference fails to teach the use of a stabilizer, and a starter both being disposed in the main body. The ('517) reference teaches the use a stabilizer (4 and 6) and a starter (3). The ('517) reference further teaches that the UV lamp is to be used with a tanning bed (Use, lines 1-2) such that it is intrinsic that the stabilizer and the starter are disposed in the main body of the tanning bed along with the UV lamp. Thus, it would have been obvious to one having ordinary skill in the art to modify the device of the ('817) reference to include a glass-fiber-photocatalytic cloth as taught by the ('712) reference such that the air to be treated can thoroughly contact the coated surfaces, and sufficient transparency to light at a wavelength to which the photoreactive material photoreacts to ensure that all the coated surfaces receive such light at an adequate energy level to ensure the catalytic or photoreactive effect (col.2, lines 18-24).

With respect to claims 3-4, 6 and 10-12, the ('817) reference discloses the following: a germicidal wavelength range for the emitted radiation (col.2, lines 70-72), straight UV lamps (49), power sources for both of the lamps and the motor are connected (col.2, lines 66-68), and a plug is disposed on the lamp power source (47). The bottom section of lamp power source (46) not shown, acts as a switch such that the lamp is not activated until it touches this bottom surface such that this surface is in the main body.

With regard to claims 7 and 13, the ('817) reference device include a plurality of holder rods to connect to a central lump with the main body (34, 39, and 25) having a

back net (29) and the reticular lamp-fixing element being the position of the central lump (31, the unlabeled motor container along with the motor 51 inside) and to connect the UV lamps. Further, the reticular lamp-fixing element includes a lamp-positioning element (32) being a panel of slightly curved shape. The lamp-fixing element has one end fixed on the reticular lamp-fixing element (35 and 31) while the other end being hooked at the electric connection seat (44 and 46).

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Law (U.S.P.N. 2,354,817) in view of Robertson et al (U.S.P.N. 4,892,712) and further in view of Morgan, Jr. (U.S.P.N. 5,853,676), Kratz (DE 19912517) and Lee (U.S.P.N. 6,102,660).

With respect to claim 2, the ('817) reference discloses a reticular lamp-fixing element that is a face net (31, 56, and 57) on which lamps are disposed and also discloses a back net (29), but fails to disclose a face net that is separate from the reticular lamp-fixing element. The ('712) reference, the ('676) reference and the ('517) reference all fail to disclose front or back nets and also fail to disclose a reticular lamp-fixing element. The ('660) reference discloses a face net (45 and 453). Thus, it would have been obvious to one having ordinary skill in the art to modify the device of the ('817) reference to include a face net as taught by the ('660) reference for better dispersion of the treated air through the net (col.3, lines 43-45).

6. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Law (U.S.P.N. 2,354,817) in view of Robertson et al (U.S.P.N. 4,892,712) and further in view

of Morgan, Jr. (U.S.P.N. 5,853,676), Kratz (DE 19912517) and Monroe (U.S.P.N. 4,055,113).

With respect to claims 8-9, the ('817) reference fails to disclose a rotatable face net. In addition, the ('712) reference, the ('676) reference and the ('517) reference all fail to disclose a rotatable face net and a reticular lamp-fixing element. However, with regard to claims 8-9, the ('113) reference discloses a rotatable face net (54). Thus, it would have been obvious to one having ordinary skill in the art to modify the device of the ('817) reference to include a rotatable face net as taught by the ('113) reference in order to create air movement, which enhances flow of air (col.2, lines 51-54).

Response to Arguments

7. Applicant's arguments filed 09/08/2004 have been fully considered but they are not persuasive.

On page 8 of the Remark section, applicant argues that, "the purification of the air is not uniform". This limitation is not recited in the instant claims.

On page 8 of the Remark section, applicant argues that, "The linear lamp tubes do not provide much space for air flow between them." The UV lamps in the ('817) reference do have enough space between them for air to flow such that maximizing or minimizing this space is a matter of routine experimentation.

On page 9 of the Remark section, applicant argues that, "The Robertson reference is not directed to a fan-mounted purification system." The ('712) reference is applied to show that the use of a titanium dioxide photoreactive material is known in the

art of treating air and not for usage as a fan-mounted purification system, which has already been taught in the ('817) reference.

The ('676) reference teaches that the use of annular ultraviolet lamps is known in the art to treating fluids.

On page 11 of the Remarks section, applicant argues that, "This reference is directed to, essentially, a standard fan and does not teach the use of a photocatalytic lamp device for the purification of the air flowing through the fan." The ('660) reference is only used to show that the use of a face net is known in the art and not for a photocatalytic lamp device. The use of a photocatalytic lamp is taught in the ('712) reference.

On page 12 of the Remarks section, applicant argues that, "This reference does not teach or suggest the use of any photocatalytic air purification system." The ('113) reference is only used to show that the use of a rotatable face net is known in the art and not for the use of a photocatalytic air purification system. The use of a photocatalytic lamp is taught in the ('712) reference.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
9. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 6:30-3:00.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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